

REMARKS

The following amendments and remarks are filed in response to the Office Action dated February 22, 2002. For the following reasons, this Application should be condition for allowance and the case passed to issue.

No new matter is introduced by the amendment. New claim 10 is supported by FIG. 1 and the accompanying portions of the specification. New claim 11 is supported by FIG. 4 and the accompanying portions of the specification. New claim 12 is supported by FIG. 8 and the accompanying portions of the specification.

Claim Rejections Under 35 U.S.C. § 112

Claims 4 and 5 are rejected under 35 USC § 112, second paragraph, as being indefinite. This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The rejection of claims 4 and 5 is moot as claims 4 and 5 have been cancelled. Applicants submit that new claims 10-12 fully comport with the requirements of 35 U.S.C. § 112.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-3 are rejected under 35 USC § 103(a) as being unpatentable over alleged admitted prior art (APA) in view of Fukui et al. (U.S. Patent No. 6,100,594) and Williams et al. (U.S. Patent No. 5,665,996). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The rejection of claims 1-3 is moot as claims 1-3 have been canceled. Applicants submit that new claims 10-12 are distinguishable over the alleged admitted prior art and Fukui for at least the following reasons:

Claim 10 requires a semiconductor chip positioned on the circuit board, wherein the circuit board has a first pad, a second pad spaced away from the first pad in a direction along an outer peripheral edge of the semiconductor chip, and a wire connecting between the first pad and the second pad on a surface of the circuit board supporting the semiconductor chip. Claim 10 further requires that a third pad on the semiconductor chip is positioned adjacent to the second pad on the circuit board but away from the first pad on the circuit board and the second pad on the circuit board and the third pad on the semiconductor chip are electrically connected through a bonding wire. This arrangement is shown in FIG. 1, which illustrates the circuit board 14, semiconductor chip 30, first pad 18, second pad 16Y1', and third pad 32Y1.

Claim 11 requires a first semiconductor chip with a first pad, a second pad spaced away from the first pad in a direction along an outer peripheral edge of the semiconductor chip, and a wire connecting between the first pad and the second pad on a surface of the semiconductor chip. Claim 11 further requires that a third pad on a second semiconductor chip, positioned on the first semiconductor chip, is positioned adjacent to the second pad but away from the first pad and the second pad and the third pad are electrically connected through the bonding wire. This arrangement is shown in FIG. 4, which illustrates the first semiconductor chip 26, second semiconductor chip 30, first pad 32Y0', second pad 32Y1', and third pad 32Y1.

Claim 12 requires a first semiconductor chip with a first pad, a second pad spaced away from the first pad in a direction along an outer peripheral edge of the semiconductor chip, and a wire connecting between the first pad and the second pad on a surface of the semiconductor chip. The first pad is positioned in its region facing a second semiconductor chip, while the second pad is positioned outside the region. Claim 12 further requires that a third pad on the second semiconductor chip faces and is in electrical contact with the first pad. This arrangement is shown in FIG. 8, which illustrates the first semiconductor chip 26, semiconductor chip 30, first pad 58, second pad 64, and third pad 52Y1.

The alleged admitted prior art and Fukui, whether taken alone, or in combination, fail to disclose the claimed circuit board and/or semiconductor chip and pad arrangements discussed above, as required by claims 10-12. Furthermore, there is no suggestion in the prior art to modify the prior art arrangements to provide the claimed semiconductor devices with the above circuit board and/or semiconductor chip and pad arrangements.

Claims 4-6 are rejected under 35 USC § 103(a) as being unpatentable over the alleged APA in view of Bertin et al (U.S. Patent No. 6,294,406) and Fukui. This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The rejection of claims 4-6 is moot as these claims have been canceled. In addition, new claims 10-12 are distinguishable over the combination of the alleged APA, Bertin et al., and Fukui et al. The addition of the Bertin reference does not render claims 10-12 obvious. Bertin does not cure the deficiencies of the alleged APA and Fukui. Furthermore, there is no suggestion in Bertin et al. to modify the alleged APA and/or Fukui to achieve the claimed semiconductor device.

The claimed semiconductor device allows the use of shorter bonding wires and prevents the bonding wires from crossing over each other. The claimed semiconductor device is also capable of being mounted on a variety of mother boards without any need to change the circuit pattern of the semiconductor chips.

In light of the Amendments and Remarks above, this application should be considered in condition for allowance. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY



Bernard P. Codd
Registration No. 46,429

600 13th Street, N.W.
Washington, DC 20005-3096
(202)756-8000 BPC:MWE
Facsimile: (202)756-8087
Date: June 24, 2002